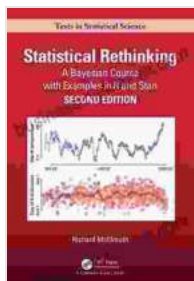


Statistical Rethinking: A Bayesian Course with Examples in R and Stan

Rethinking with Bayesian Statistics

Statistical Rethinking: A Bayesian Course with Examples in R and Stan is a book by Richard McElreath that introduces Bayesian statistics. Bayesian statistics is a statistical approach that uses Bayes' theorem to update beliefs in the light of new evidence. It is often contrasted with frequentist statistics, which uses the theory of probability to make inferences about the population from a sample.

Bayesian statistics has a number of advantages over frequentist statistics. First, it is more intuitive. Bayes' theorem is a simple and straightforward calculation that can be easily understood. Second, Bayesian statistics is more flexible. It can be used to analyze a wider variety of data types, and it can be used to make more complex inferences. Third, Bayesian statistics is more powerful. It can produce more accurate results, even with small sample sizes.



Statistical Rethinking-E-Book: A Bayesian Course with Examples in R and STAN (Chapman & Hall/CRC Texts in Statistical Science) 2nd Edition, Kindle Edition

by Elliot Davis

★★★★☆ 4.8 out of 5

Language : English

File size : 43261 KB

Screen Reader : Supported

Print length : 405 pages

Lending : Enabled



However, Bayesian statistics also has some disadvantages. First, it can be more computationally intensive than frequentist statistics. Second, it can be more difficult to interpret the results of Bayesian analysis. Third, Bayesian statistics is not as widely used as frequentist statistics, and there is less software available to support it.

Book Outline

Statistical Rethinking is divided into three parts. Part I introduces the basic concepts of Bayesian statistics. Part II covers the most common Bayesian models, including linear regression, logistic regression, and Bayesian networks. Part III covers more advanced topics, such as hierarchical models, model selection, and Bayesian computation.

Each chapter in the book includes:

- A clear and concise explanation of the topic
- Examples of how to use Bayesian statistics to solve real-world problems
- R and Stan code for implementing the Bayesian models

The book is written in a friendly and engaging style, and it is suitable for readers with no prior knowledge of Bayesian statistics.

About the Author

Richard McElreath is a professor of statistics at the University of California, Berkeley. He is the author of several books on Bayesian statistics, including *Statistical Rethinking* and *Bayesian Statistics for Biology*. McElreath is a leading expert in Bayesian statistics, and his work has helped to make Bayesian statistics more accessible to a wider audience.

Key Features of Statistical Rethinking

- **Comprehensive:** Covers the full range of Bayesian statistics, from basic concepts to advanced topics.
- **Accessible:** Written in a friendly and engaging style, suitable for readers with no prior knowledge of Bayesian statistics.
- **Practical:** Includes examples of how to use Bayesian statistics to solve real-world problems.
- **Technical:** Provides R and Stan code for implementing the Bayesian models.

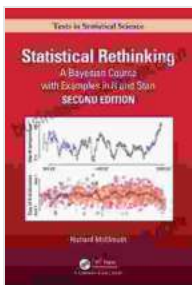
Who Should Read Statistical Rethinking?

Statistical Rethinking is a valuable resource for anyone who wants to learn about Bayesian statistics. It is suitable for students, researchers, and practitioners in a wide range of fields.

- **Students:** Statistical Rethinking is a great textbook for introductory Bayesian statistics courses. It is also a valuable resource for students in more advanced courses, such as Bayesian modeling and Bayesian computation.
- **Researchers:** Statistical Rethinking can help researchers to apply Bayesian statistics to their own research. It provides a comprehensive

overview of the field, and it includes examples of how to use Bayesian statistics to solve a wide range of problems.

- **Practitioners:** Statistical Rethinking can help practitioners to use Bayesian statistics to improve their decision-making. It provides a clear and concise explanation of the theory behind Bayesian statistics, and it includes examples of how to use Bayesian statistics to solve real-world problems.



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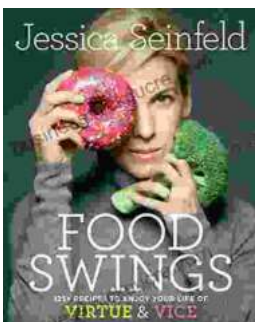
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